

NOTEBOOKS

FAQ

Q The City of London is now one big wireless hotspot. Can we expect similar schemes across the country?

A It's unlikely that similar schemes will become commonplace soon. There are 127 WiFi nodes in the City of London system, which give 95 per cent wireless coverage. The nodes are built into existing street furniture, and new 'mesh' technology allows users to be handed from node to node without a break in the signal.

Such a large investment is bound to see a return in this part of London, but it's unlikely we'll see similar schemes elsewhere quite yet.

There are, however, plans to provide mobile phone and WiFi coverage on the London Underground by 2009. Details are yet to be confirmed, and coverage may be limited to stations and platforms. A number of providers are making bids to run the scheme, and you may even have to pay a premium to make and receive calls on this subterranean network.

Seth Barton

Notebooks and video expert

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PANASONIC Toughbook CF-Y5

★★★★★

£2,084 inc VAT

Some of Panasonic's Toughbook range may look as though they've been made out of JCB digger parts, but they are tough enough to survive day-to-day use in such inhospitable environments as building sites. The CF-Y5, however, is described by Panasonic as being "semi-ruggedised", and is designed for those who travel regularly and want a notebook that'll survive a few bumps and scrapes.

The magnesium alloy chassis is designed to withstand weights of up to 100kg. We got one of our heavier writers to stand on it and it suffered no ill effects. Dropping the notebook from 30cm and pouring water over the keyboard also did no damage.

Despite being tough, the CF-Y5 is incredibly light at only 1.5kg. It's not the lightest ultra-portable we've seen, but considering it's got a built-in optical drive and 14.1in display, it's one of the most impressive. The whole notebook is very slender, too, although there are two raised strips on the lid that help protect the display.

The battery is fairly compact and doesn't jut out of the back of the chassis. However, at 60.7Wh it has a higher capacity than any of the batteries in last month's Labs. The CF-Y5 uses a low-voltage processor, and managed an amazing five hours and 37 minutes in our light usage battery test. It's one of the best times we've ever seen, and a spare battery should give you a working day's worth of power.

Opening the lid reveals the unusual layout. The DVD writer is loaded from the top, with access from a hatch below the keyboard and beside the touch pad. The keyboard is good, and the keys have enough feedback to make typing long documents comfortable. The



round touch pad means you'll often have to reposition your finger to reach the corners of the screen.

The display has a native resolution of 1,440x1,050, so it's ideal for working with big spreadsheets or image files. There's a little graininess, but this isn't unusual with anti-glare finishes, and at least you won't suffer unwanted reflections from bright light sources. Viewing angles aren't terribly impressive, but our greyscale and colour wheel tests looked great when viewed head on.

The Intel Core Duo L2400 processor runs at 1.66GHz, and with 512MB of memory it's easily quick enough for office tasks. Adding an extra 512MB will make it capable of memory-intensive tasks such as photo-manipulation. However, the hard disk holds only 60GB, which is fine for office work but will fill up quickly with large media files.

The CF-Y5 feels great to use and the battery life and high-resolution screen are both outstanding. However, it costs over £900 more than our favourite ultra-portable, Lenovo's X60s (see 'Also Consider...', page 18). That said, if you think that a normal notebook won't survive your working week, then you've little choice but to spend the extra.

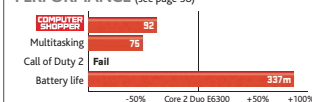
Seth Barton

SUMMARY

- ✓ Very tough
- ✓ Great battery life; high-res screen
- ✗ Very expensive

ULTRA-PORTABLE NOTEBOOK 1.66GHz Intel Core Duo L2400, 512MB RAM, 60GB hard disk, Intel GMA 950 graphics, DVD+/-RW +/-DL drive, 14.1in LCD widescreen, weighs 1.5kg
PART CODE CFY5LWVYZBE
SUPPLIER www.laptopshop.co.uk
DETAILS www.toughbook-europe.com

PERFORMANCE (see page 58)



Also consider...

PC NEXTDAY

Zoostorm 53-7701 Family Laptop

★★★★★

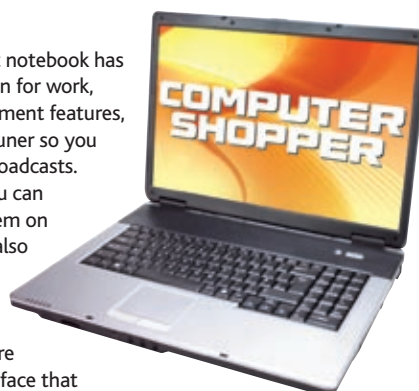
£881 inc VAT



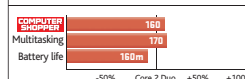
This desktop replacement notebook has an impressive specification for work, and some great entertainment features, too. There's a built-in hybrid TV tuner so you can receive analogue or digital broadcasts. Using Windows Media Center, you can schedule recordings and store them on the big 160GB hard disk. There's also a decent 3D graphics chipset so you can play games.

The 17in widescreen display is fine for most purposes, but there is a light graininess across the surface that detracts from fine detail. It has a 1,440x900-pixel native resolution, giving you plenty of space to work with. The big screen also means there's space for a number pad alongside the keyboard.

Inside, there's a fast processor and 2GB of RAM. This notebook can take on the most demanding



NOTEBOOK PC 2GHz Intel Core 2 Duo T7200, 2GB RAM, 160GB hard disk, ATI Radeon Mobility X1600 graphics, DVD+/-RW +/-DL, 17in widescreen LCD, 3.6kg
SUPPLIER sales@pcnextday.co.uk
DETAILS www.pcnextday.co.uk
PART CODE 3353-7701
✓ Fast in applications; plenty of ports ✗ Grainy display
FULL REVIEW May 2007



tasks such as video editing and won't need upgrading for some time to come. Even the battery life is impressive for a notebook of this size. This is a great choice if you want lots of features and computing power for the lowest possible price.

SAMSUNG R20

★★★★

£525 inc VAT

We don't see a lot of budget notebooks from Samsung, as it's better known for snazzy ultra-portables such as the Q40, reviewed in last month's Labs. The R20 doesn't look like a budget notebook, though, as it's slender and has a stylish, glossy black lid.

The battery is a long, thin cylinder that protrudes out past the lid. It has a built-in indicator with five LEDs to tell you how much charge remains. This is visible on the bottom of the notebook even when the battery is inserted.

However, the battery's small 38.5Wh capacity meant the R20 managed only a disappointing one-and-a-half hours in our light usage test. This is a real pity as it's a lightweight and compact notebook, and would be well suited to mobile use. The size is kept down by the small 14.1in display. This has the same 1,280x800 resolution as the more common 15.4in displays, though. It's capable of a clean and fairly bright white, but there's an unpleasant grain across the surface of the screen that detracts from fine detail. It also has poor vertical viewing angles, so you have to angle the display precisely to get the best picture.

Between the display and the keyboard is an engraved pattern of swirls. The keyboard is marked with an italicised font that looks rather ugly. In every other respect, though, the keyboard is fine and the big keys make typing easy.

The edges of the R20 are light on ports. There are only two USB2 ports, and no FireWire port. The memory card reader supports only Sony's Memory Stick format, which is annoying as even Sony has started putting SD card slots on many of its own notebooks.



Inside there's an Intel Core 2 Duo T2250 dual-core processor along with 1GB of memory, which is an impressive combination at this price. Sadly, the onboard graphics chipset uses up more RAM than necessary: either 128MB or 256MB, depending on the BIOS settings. This didn't affect our benchmarks too much, but those doing demanding tasks should reduce this setting to 128MB to free up as much memory as possible. The graphics chipset isn't up to playing modern games, but you will be able to play older titles at low detail settings.

The 160GB hard disk gives plenty of space for storing media such as music and video files. This notebook comes with Windows Vista Home Premium, so you can use Windows Media Center to organise and browse your files. A DVD writer is fitted so you can back up files or burn home movies.

The R20 has a good specification for the price, and is a good choice for those on tight budget that want a dual-core processor and a large hard disk. However, the grainy screen, limited number of ports and poor battery life hold it back.

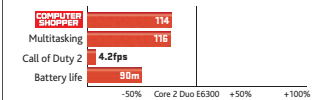
Seth Barton

SUMMARY

- ✓ Fast for the price
- ✓ Big hard disk
- ✗ Grainy screen

NOTEBOOK PC 1.73GHz Intel Core Duo T2250, 1GB RAM, 160GB hard disk, ATI Radeon Xpress 1250 graphics, DVD+/-RW +/-DL drive, 14.1in LCD widescreen, 2.4kg
PART CODE NP-R20F000/SUK
SUPPLIER www.laptopsdirect.co.uk
DETAILS <http://uk.asus.com>

PERFORMANCE (see page 58)



BYTE SIZE

TRUST 15.4" Notebook Backpack BG-4400p

★★★★

£15 inc VAT



You can pay £60 or more for a good notebook backpack, so Trust's BG-4400p looks good value. It has one large compartment, inside which is a padded section that can hold a notebook with a maximum 15.4in screen size. Undoing the zip around the outside of the compartment expands it further. There's a big pocket at the front with useful dividers for small items.

The bag is very light, with well-padded shoulder straps. It's fairly comfortable to wear, but it's quite thinly padded. With thin padding and big compartments, though, it's got plenty of space, so it's good value for taking a notebook on a weekend break.

Simon Handby

SUPPLIER www.komplett.co.uk
DETAILS www.trust.com

SONY Travel Mouse SMU-M10

★★★★

£16 inc VAT



Most notebook mice look like a shrunken desktop model, but their small size means that the mouse's arch typically doesn't support your palm very well. Sony hasn't even bothered to give its SMU-M10 travel mouse an arch: it's simply flat.

The 800dpi sensor means cursor movement is sensitive, and the tiny scroll wheel works well. The mouse's 65cm USB cable wraps neatly around its body, so you can unroll only as much as you need. The USB plug tucks in when not in use, so you can pack the mouse away without too much fear of it causing scratches. Though it's not particularly attractive or comfortable, this 1cm-thick mouse is pleasant to use and easy to transport.

Simon Handby

SUPPLIER www.techstore-online.co.uk
DETAILS www.sony.co.uk

ACER Aspire 5101AWLMi

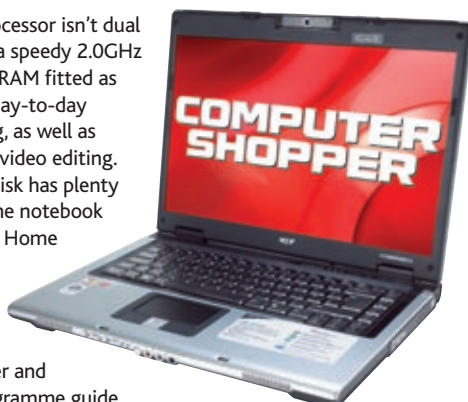
★★★★★

£435 inc VAT

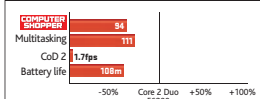
This notebook's processor isn't dual core, but it runs at a speedy 2.0GHz and there's 1GB of RAM fitted as well. It's easily capable of day-to-day tasks such as web browsing, as well as straightforward photo and video editing.

The large 120GB hard disk has plenty of space for big files, and the notebook comes with Windows Vista Home Premium installed. This includes Windows Media Center, so you can browse your media files with ease, or add a TV tuner and use the free electronic programme guide. There's also a DVD writer for making backups and burning home movies.

You'll be able to enjoy photos and videos to the full thanks to the excellent widescreen display. It's bright



NOTEBOOK PC 2.0GHz AMD Turion 64 MK-36, 1GB RAM, 120GB hard disk, ATI Radeon Xpress 1100 graphics, DVD+/-RW +/-DL drive, 15.4in LCD widescreen, 2.7kg
SUPPLIER www.laptopsdirect.co.uk
DETAILS www.acer.co.uk
PART CODE LX.AX90X.017
✓ Fast for a budget notebook; DVD writer; big hard disk ✗ Poor battery life FULL REVIEW Jul 2007



and has good contrast, plus there's a built-in webcam for video chat sessions. This is a great budget notebook at an excellent price.

BYTE SIZE

SONY Stereo Headset DR-EX230DP

★★★★
£27 inc VAT

Sony's DR-EX230DP headset is a lightweight microphone and earphone combination for notebook users. The in-ear earphones are supplied with small, medium and large sleeves to help you find the right fit. They sound good with lots of bass, but some midrange frequencies are a little harsh.

A small stereo microphone is built into the lead to the left earphone. This captures clear sound, although we found that we needed our test PC's mic boost feature for the best results. There's no push-button mute, and the design means that your computer's mic and headphone sockets can't be further apart than 25cm or so. That said, this is a good-quality, highly portable headset.

Simon Handby

SUPPLIER www.amazon.co.uk
DETAILS www.sony.co.uk



SWORDFISH 300SC

★★★★★
£30 inc VAT

Protecting your identity isn't just about installing software on your PC, it's also about making sure that your paper documents can't be read. With Swordfish's slim 300SC you can shred up to five sheets of paper at once, without taking up too much desk space.

The shredder automatically starts when it detects paper in its slot and it chews through a sheet of A4 in around four seconds. It coped well with all our samples, though thin card caused it to jam. For regular paper, though, it's no problem.

The 300SC isn't designed for CDs or DVDs, so you'll have to resort to more conventional methods of destruction or buy a different scanner with an optical disc slot. For regular jobs, though, the 300SC is an affordable way of destroying your documents.

David Ludlow

SUPPLIER TBC
DETAILS www.snopake.com



TOSHIBA Satellite L30-113

★★★★
£349 inc VAT

If you want a basic notebook for browsing the internet, sending email and printing your digital photos, then you need only a cheap model.

Toshiba's Satellite L30-113 costs £86 less than our favourite budget notebook, the Aspire 5101AWLMi (see 'Also Consider...', page 17). This is a significant saving considering the low prices of these products, but we would expect Toshiba to have made some serious economies to achieve this.

The first thing we noticed was its slower performance. Its Intel Celeron M 430 processor runs at a respectable 1.73GHz, but it still performed far slower than the Aspire. This is because the Aspire comes fitted with 1GB of RAM compared to the Satellite's 512MB. Windows Vista benefits massively from having plenty of memory available, and the Satellite really suffered in our 2D benchmarks. This was very noticeable when using the computer for image work, with it struggling to open multiple high-resolution images.

Even if you're undertaking only the most basic of tasks, there's a lot more to consider when buying a notebook. The Satellite only has two USB2 ports for plugging in peripherals, which will be quickly filled by input devices, printers, digital cameras or MP3 players, leaving you needing an external hub. The Aspire has three USB2 ports plus a memory card reader, so you can easily access photos from your digital camera.

The anti-glare coating on the screen helps keep down unwanted reflections from office lights or the sun. The Satellite's display isn't terribly bright or vibrant and the Aspire's display does a better job of



making your photos and video look good. If you need to work on the move you'd be better off getting Toshiba's A120 notebook, as it has a damage-resistant design and a shock-resistant hard disk.

The Satellite is well built and feels very sturdy. The keyboard is a good size and is fine for shorter documents. The touch pad is very accurate, although the buttons could be bigger.

The Satellite's 60GB hard disk is half the size of the Aspire's. The Satellite also comes with Windows Home

Basic, rather than the Premium version used by Acer. This means you miss out on both Windows Media Center and Windows Mobility Center.

We understand that notebooks won't be the biggest priority in everyone's budget. However, we think that the £77 you'll save by buying this notebook can't be justified given its slow performance, lack of ports and small hard disk. The Satellite isn't a bad notebook for the money, but if you want a budget Vista notebook then you'll be far better off with the Aspire.

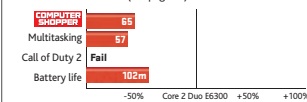
Seth Barton

SUMMARY

- ✓ Cheap
- ✗ Slow in applications
- ✗ Small hard disk

NOTEBOOK PC 1.73GHz Intel Celeron M 430, 512MB RAM, 60GB hard disk, ATI Xpress 200M graphics, DVD+/-RW +/-DL drive, 15.4in LCD widescreen, weighs 2.5kg
PART CODE PSAC1E-0J0021EN
SUPPLIER www.komplett.co.uk
DETAILS www.toshiba.co.uk

PERFORMANCE (see page 58)



Also consider...

LENOVO ThinkPad X60s

★★★★★
£1,178 inc VAT

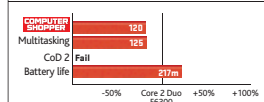
BEST BUY This ThinkPad's black chassis is light, slender and looks business-like. Despite being small and slim, though, it's very sturdy and should take a few knocks. The display has an anti-glare finish so you can work in most lighting conditions. Lenovo has included a built-in 3G data card for fast mobile internet; however, you will need a monthly contract from a network provider.

It did surprisingly well in our benchmarks despite its low-voltage processor, and the small battery lasted for half a working day in our light usage test. If you need a longer battery life then Lenovo has a range of larger alternatives.



ULTRA-PORTABLE NOTEBOOK

Intel Core Duo L2400, 1GB RAM, 80GB disk, Intel Graphics Media Accelerator 950 graphics, no optical drive, 12.1in LCD, 1.3kg
SUPPLIER www.laptopsdirect.co.uk
DETAILS www.lenovo.co.uk
PART CODE UK16DUK
✓ Lightweight; built-in 3G ✗ No optical drive FULL REVIEW Jul 2007



The keyboard is great for typing documents on the move, and there's a fingerprint reader for security. If you need an ultra-portable notebook for office work, this is the best choice.

BYTE SIZE

RAZER

Tarantula

★★★

£69 inc VAT

Razer's Tarantula keyboard is designed with gamers in mind. You can simultaneously press multiple keys without any conflicts. The excellent software also allows you to define custom configurations and keyboard macros.

We found the keyboard to be a little on the small side. With our fingers placed on the usual WASD keys, our thumb naturally sat below the space bar, and our little finger was on the very edge of the small shift key. The built-in wrist rest wasn't suitably placed either.

You do get a two-port USB hub and pass-through sockets for headphones and a mic. However, it's not nearly enough to justify the price.

Seth Barton

SUPPLIER www.afterhours.co.uk
DETAILS www.razerzone.com



SAITEK

Pro Gamer Command Unit

★★★★

£31 inc VAT

Saitek's Pro Gamer Command Unit is designed to replace your keyboard when you play games. There are three modes accessible using a sliding switch, and each causes the keys to glow a different colour. Green gives you common FPS controls, while red is set up for RTS games. Blue mode can be customised using the supplied software, assigning controls across the 21 keys as you wish.

It's fairly comfortable to use, with a built-in wrist rest. It's hard to reach the top row of keys without lifting your whole hand up, though. It could be useful if you make the most of the thumb stick and macros, but otherwise £31 is too much for a keyboard replacement.

Seth Barton

SUPPLIER www.aria.co.uk
DETAILS www.saitek.com



CHOOSING A...

Notebook Computer

Follow the steps to find your ideal specs

PROCESSOR: 1.6GHz Intel Celeron M 420
MEMORY: 512MB DDR
HARD DISK: 60GB
STORAGE: DVD rewriter
GRAPHICS: Integrated (shares system memory)
SCREEN: 15.4in widescreen 1,280x800 LCD
EXTRAS: Wireless networking
CONNECTORS: Three USB2, memory card reader
SOFTWARE: Windows Vista Home Premium
WEIGHT: 3kg
Recommended minimum in grey

1 The minimum specification of notebook we recommend, shown above in grey, is a good starting point when working out your ideal system. This is an average notebook that should cost around £600. It is not particularly powerful or, at 3kg, particularly portable.

2 Dual-core processors, such as Intel's Core 2 Duo range, can be much faster at many tough tasks. This is dependent on software support, but a lot of applications have now been optimised. Dual-core processors are widely available and often cost only a little more than their single-core equivalents.

3 Most notebooks come with 15.4in 1,280x800 widescreen displays, which are great for watching DVDs or TV. If you want a notebook for use around the home, especially for entertainment purposes, it's worth considering one with a larger 17in display. This will also have a higher native resolution of at least 1,440x900, giving you a bigger desktop. This makes it far easier to use complex applications, such as photo- or video-editing software.

4 A modem, 10/100 Ethernet port and wireless 802.11b/g networking (WiFi) should be fitted as standard, but there are also some other ports and connectors that you might want. FireWire (IEEE 1394) is common and useful for digital video enthusiasts. Bluetooth is handy for connecting to a mobile phone, but it's usually fitted only to more expensive business notebooks. Memory card readers are pretty much standard, but check that your camera or MP3 player's format is supported.

5 If portability is your main priority, look for a notebook with a 12.1in display.

Spending around £1,000 will get you an ultra-portable notebook that weighs under 2kg. Most of these notebooks are just as powerful as their larger counterparts, though some use slower, ultra-low voltage (ULV) processors to further increase battery life.

6 Some ultra-portables can attach to an optional docking station, which incorporates drives, ports and power, when you get home to your desk. It's the best of both worlds, but tends to be expensive. Others have separate DVD drives, or no optical drive at all, to help keep size and weight to a minimum.

7 If you're not swayed by ultra-portable chic, you can get a lot more for your money. Entertainment notebooks pile on the features but still keep the price under £1,200. You should expect a 17in widescreen display, hybrid TV tuner and a remote control.

8 There are features you can add to a notebook without increasing the weight or reducing battery life. A 120GB or 160GB hard disk will give you much more storage space, while 1GB of RAM will help you speed through tougher tasks. DVD rewriter drives are standard and will allow you to burn CDs and DVDs on your notebook.

9 Dedicated graphics let you play modern 3D games and are increasingly common on all but the cheapest or lightest notebooks. Look for an ATI Radeon Mobility X1600 or Nvidia GeForce Go 7600 chip as a minimum for getting smooth frame rates on the latest titles. Many notebooks use integrated graphics, which are fine for all other purposes, but use up system memory.

10 Once you're happy with your specification, start to shortlist some models you can afford. Check the weight, display size and battery life of each of them. If these are not acceptable, you need to reconsider your priorities and which features you really need.

